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Northwestern Plating Works Site

Chicago, IL - EPA Region V
POLREP #4 - Clean-up Complete

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EPA Region 5 Records Ctr.



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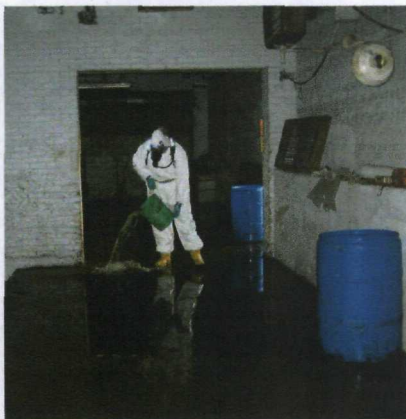
12/20/2006

Pollution Report (POLREP) # 4

On-Scene Coordinator - James Mitchell

Time-Critical - Removal Action

Start Date: 8/2/2006



Site Description

Northwestern Plating Works (NPW) Inc. is a metal plating company that has been in operation since 1920's. NPW base operations consisted of plating brass, zinc, copper and cadmium to other solid surfaces for corrosion protection. According to the Chicago Department of Environment (CDOE), operations ceased at this facility in August 2005. However, Mr. David Jacobs, the principal of the corporation which is the current owner of the facility, was unresponsive in providing CDOE with a closure plan. Based on inspections by CDOE, large amounts of plating chemicals and waste from plating operations were stored at the facility in an unsafe manner. CDOE was concerned about the potential health hazards from chemicals and wastes at this Site posed to nearby residents and other receptors, and the potential for the facility to dispose

of the plating materials illegally. After apparent vandalism at the facility on March 6, 2006, CDOE referred the Site to the U.S. EPA on March 9, 2006.

On April 3, 2006, U.S. EPA On-Scene Coordinator (OSC) Michael Harris, OSC Jim Mitchell, and Superfund Technical Assessment and Response Team (START) members Dave Franc and Liz Lehnertz arrived at the site to conduct assessment activities, including documentation of site conditions, collection of samples for threat analysis, and inventory of the materials stored at the NPW Site.

The NPW Site consists of a building, an attached shed, and an open space area used for storage. The building was in fair condition, but a number of holes in the roof and several broken windows were observed. The interior of the building consisted of an office area, warehouse area, maintenance area, boiler room, a pickle and clean room, and two shipping and receiving docks.

The warehouse portion of the building is where plating operations occurred. NPW base operations consisted of plating brass, zinc, copper and cadmium to other solid surfaces. Seven rows of vats supported the plating of these metals. Each vat contained 30-40 gallons of various liquids. These liquids solutions were labeled, "cleaner," "rinse," "acid," "zinc," "cadmium," "copper," "dip," and "nickel." The majority of these vats were observed to be overflowing onto the floor. Leaking and staining of the concrete floor was observed near Plating Line 4, the zinc plating line. During the site assessment, it was raining and water was entering the warehouse through holes in the roof. Water was hitting the vats and pooling on the floor. A pH of 10 of standing water from the floor on the southwest portion of the warehouse was measured. Unidentified solid materials were on the floor in several areas of the warehouse. Four large above ground storage (AST) tanks were observed in the warehouse. These tanks are believed to support cyanide and heavy metal treatment operations. The AST included a 1,200 gallon cyanide reduction tank, a 3,000 gallon pH adjust tank, a 6,000 gallon clarifier tank, and a 5,000 gallon settling tank. The warehouse also contained a cyanide filter press, numerous unidentified drums, and seven 1 cubic yard bags of solid waste with a Department of Transportation

(DOT) label of 3077 (RCRA hazardous waste) was noted on the bag.

Based on site assessment activities which included documentation of site conditions, collection of samples for threat analysis, and inventory of the materials stored at the NPW Site, U.S.EPA has determined that conditions at the NPW Site present an imminent and substantial threat to the public health, or welfare, and the environment and meet the criteria for a removal action provided for in the National Contingency Plan (NCP), Section 300.415, Paragraph (b)(2). 40 C.F.R.' 300.415(b)(2)(I), (iii) and (v).

Current Activities

Daily work activities/orders during this reporting period are required for the safe removal and disposal of all hazardous materials and chemicals from the NPW Site. The daily work orders are outlined each day between the EPA OSC and the Environmental Quality Management (EQM) Response Manager (RM). Each morning these work orders are discussed with the foreman and response crews. A general summary of the work orders and specific tasks are provided below.

- 1) Daily Site Health and Safety meetings start each day at 6:30 am. These meetings review good health and safety practices that must be observed on a routine basis as well as point out any new concerns that have not been previously addressed. In addition, any relevant air monitoring results that may impact work activities for the day are discussed.
- 2) Daily air monitoring to support removal activities inside the NPW building include MultiRAE PLUS and Draeger Multi-warn gas monitors which measured gas concentrations of carbon monoxide, hydrogen sulfide, hydrogen cyanide, chlorine, ammonia, methane (lower explosive limits), and volatile organic compounds. Total particulate levels are measured with the use of a Thermo Anderson DR-4000 portable particulate sizing monitor. A wireless system utilizing the Rapid Assessment Tools was put into place to supplement the existing air monitoring, and to allow the OSC to monitor real time hydrogen cyanide levels and other gases while outside of the Exclusion Zone. In addition air monitoring is periodically performed outside the building to document that no releases of gases and vapors are occurring during site operations.
- 3) Pumping and bulking of neutral, base and cyanide liquids into a large above ground storage tank (clarifier) that is secure and away from acids.
- 4) Repacking of solid/sludge material, containing heavy metals and cyanide from deteriorating drums and vat/tanks bottoms into new drums.
- 5) Cleaning and rinsing of drums and vats.
- 6) Cutting up of empty drums and vats.
- 7) Disposal of RCRA empty drums.
- 8) Cutting large openings in clarifier and shoveling sludge into new drums.
- 9) Cutting large chain out of clarifier.
- 10) Cleaning and treating clarifier with sodium hydroxide, chlorine bleach, and lastly rinsing via power wash.
- 11) Bulking scrap metal and loading into roll-off box.
- 12) Cleaning out floor drains and trenches.
- 13) Cleaning and sticker-labeling drums for transport.
- 14) Removing tank 23 located above clarifier and tank 22.
- 15) Cutting down pipes from ceiling.
- 16) Cleaning and washing entire facility floor.
- 17) Applying a treatment of sodium hydroxide and then chlorine bleach over entire facility floor, courtyard shed, dock areas, and completing treatment with water power washing.

18) Collecting five surface concrete floor samples, one ceiling sample, and one west wall sample via chipper bar and chisel.

19) Collecting five concrete cores and eight corresponding soil samples from beneath the concrete floor inside facility.

20) Notification of local fire department of site closure on December 20, 2006.

21) Maintaining evening and weekend site security.

Wednesday December 20, 2006, OSC Jim Mitchell conducted a final walk through for Robert J. Gaggiano a pollution officer from the Metropolitan Water Reclamation District of Greater Chicago. The OSC pointed out the removal of all chemicals from the NPW site, the plugged sewer drains in the building, and the overall treated and cleaned condition of the building.

Thursday, December 21, 2006 OSC Jim Mitchell meet with Battalion Chief Mike from Engine Company 14 of the Chicago Fire Department to update that the removal action at NPW Site is complete and it can be removed from their Level 1 watch list.

Disposal information during this reporting period included:

Four shipments totaling approximately 18,000 gallons of cyanide containing liquids were pumped from the clarifier and sent off for disposal (see disposal summary).

Two shipments totaling 148 55-gallon drums of cyanide containing solids were bulked and sent off for disposal (see disposal summary).

Six shipments totaling approximately 120 yards of hazardous debris were sent off for disposal (see disposal summary).

Two shipments of various chemicals (i.e. cyanide products, paint, tar, flammable liquids, aerosols, ferrous sulfate, sodium metabisulfate) and over-packed acids (hydrofluoric and nitric) were sent off for disposal (see disposal summary).

Planned Removal Actions

Complete demobilization of the site and equipment will continue through Thursday, December 21, 2006.

Thursday, December 21, the final walk through of the site will be conducted by the OSC and RM.

Friday, December 22, electricity to the facility will be turned off.

Next Steps

Laboratory analyses of the surface concrete floor samples (5) and cores (5), as well as the ceiling (1), wall (1), and soil samples (8) will be completed and reported to the EPA/START by January 2007. Analytical results will be evaluated further by EPA.

During the final walk through the EPA OSC identified issues that needed further attention by the RM. The issues identified are filling up sampling boreholes with concrete, removing 4 empty cylinders, removing 2 empty poly drums, securing west side door and general removal of garbage generated from the removal action. These issues will be addressed by the RM on January 4, 2007. A final POLREP will be generated once these actions are complete.

Key Issues

None during the reporting period.

Disposition of Wastes

Waste Stream	Quantity	Manifest #	Disposal Facility
Waste Cyanide Solutions, N.O.S., 6.1, UN1935, PGII, (Sodium Cyanide, Copper Cyanide), ERG#157	5000 gallons	11398WAS 10/25/06	Heritage Environmental Services LLC
RQ, Waste Cyanides, Inorganic, Solid, NOS, 6.1, UN 1588, PGII (D007)	68 drums	28704FLE 10/26/06	Envirite of Illinois, Inc.
Waste Cyanide Solutions, N.O.S., 6.1, UN1935, PGII, (Sodium Cyanide, Copper Cyanide), ERG#157	5000 gallons	75031WAS 11/13/06	Heritage Environmental Services LLC
Waste Cyanides, Inorganic, Solid, N.O.S., 6.1, UN1588, PGI, (Potassium Cyanide, sodium cyanide), (P098)	12 drums (CN), 2 drums (flammables), 2 drums (paint), 1 drum (non haz)	1726301JJK 11/15/06	Petro-Chem Processing
Waste Flammable Liquids, N.O.S., 3, UN1993, PGII			
Waste Paint Related Materials, 3 UN1263, PGII			
Non DOT/Non RCRA Hazardous Liquid, Non DOT Regulated			
RQ, Hazardous Waste, Solid, N.O.S. (Cadmium, Cyanide), 9, NA3077, PGIII, ERG #171	20 cubic yards	1886189JJK 11/28/06	Environmental Quality - Michigan Disposal Waste Treatment Plant
RQ, Hazardous Waste, Solid, N.O.S. (Cadmium, Cyanide), 9, NA3077, PGIII, ERG #171	20 cubic yards	1886175JJK 11/29/06	Environmental Quality - Michigan Disposal Waste Treatment Plant
RQ, Hazardous Waste, Solid, N.O.S. (Cadmium, Cyanide), 9, NA3077, PGIII, ERG #171	20 cubic yards	1886176JJK 12/04/06	Environmental Quality - Michigan Disposal Waste Treatment Plant
RQ, Waste Cyanides, Inorganic, Solid, NOS, 6.1, UN 1588, PGII (D007)	80 drums	28789FLE 12/05/06	Envirite of Illinois, Inc.
RQ, Hazardous Waste, Solid, N.O.S. (Cadmium, Cyanide), 9, NA3077, PGIII, ERG #171	20 cubic yards	1886177JJK 12/11/06	Environmental Quality - Michigan Disposal Waste Treatment Plant
Waste Cyanide Solutions, N.O.S., 6.1, UN1935, PGII, (Sodium Cyanide, Copper Cyanide), ERG#157	5000 gallons	75492WAS 12/11/06	Heritage Environmental Services LLC
RQ, Hazardous Waste, Solid, N.O.S. (Cadmium, Cyanide), 9, NA3077, PGIII, ERG #171	20 cubic yards	1886178JJK 12/14/06	Environmental Quality - Michigan Disposal Waste Treatment Plant
Waste Hydrofluoric Acid, 8 (6.1) UN1790, PGII, (D0002)	1 drum (HF), 5 drums (Nitric), 700 lbs. (nonhaz), 15 lbs. (aerosols)	1719130JJK 12/14/06	Petro-Chem Processing
Waste Nitric Acid, 8 UN2031, PGII			
Waste Aerosols, Flammable, UN1950, 2.1			

Non-DOT/Non-RCRA Hazardous

Waste Cyanide Solutions, N.O.S., 6.1,
UN1935, PGII, (Sodium Cyanide,
Copper Cyanide), ERG#157

2000 gallons

1850WAS
12/20/06

Heritage Environmental
Services LLC

RQ, Hazardous Waste, Solid, N.O.S.
(Cadmium, Cyanide), 9, NA3077,
PGIII, ERG #171

20 cubic yards

1886179JJK
12/20/06

Environmental Quality -
Michigan Disposal
Waste Treatment Plant

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